LISTING OF CLAIMS

1. (currently amended) A method of simulating a tire on snow comprising

a) making a model of the tire made up of numerically analyzable elements,

b) making a model of the snow made up of numerically analyzable elements being capable of presenting its volume change and mass density change caused by compression and being capable of maintaining a volume change and a mass density change after the compression is removed,

~~repeating:~~

c) setting of conditions for rolling the tire model and contacting the tire model with the snow model;

d) computing of deformation of the tire model; and

e) computing of deformation of the snow model,

f) repeatedly carrying out steps c), d) and e) at minute time intervals to obtain at least one of the following data: a force produced on the tire model in the back and forth direction; and mass density, pressure, stress, speed and contact force of the snow model, and

g) outputting said at least one of the data.

2. (currently amended) The method according to claim 1 or 8, wherein the method further comprises

defining the tire model as being rotatable around its rotational axis and being movable only in the vertical direction in relation to a coordinate system, and

defining the snow model as being ~~immobilize~~ immovable in relation to said coordinate system, and

said conditions including a torque applied to the tire.

3. (currently amended) The method according to claim 1 or 8, wherein the method further comprises

defining the snow model as being ~~immobilize~~ immovable in relation to a coordinate system,

defining the tire model as being rotatable around its rotational axis, and

defining a model of an elastic body of which one end is fixed in relation to the coordinate system and the other end is connected to the rotational axis, and

said conditions including a torque applied to the rotational axis of the tire.

4. (currently amended) The method according to claim ~~1, 2 or 3~~ 1 or 8, wherein the tire model is of a halved tire on one side of the tire equator.

5. (currently amended) The method according to claim 1 or 8, wherein said outputting includes outputting one of the data by visualizing the distribution thereof in gray scale or changing color.

6. (currently amended) The method according to claim 1 or 8, wherein said outputting includes outputting one of the data relating to the snow model by visualizing the distribution thereof in gray scale or changing color and overlapping a view of the snow model.

7. (currently amended) The method according to claim 1 or 8, which further comprises visualizing and outputting specific elements which have data included in a predetermined specific range.

8. (new) A method of simulating a tire on snow comprising

a) making a model of the tire made up of numerically analyzable elements,

b) making a model of the snow made up of numerically analyzable elements to have a voluminal hysteresis, wherein the voluminal hysteresis is such that,

during increasing in a compressive force applied to the snow model, the volume of the compressive-force-applied part decreases in proportion to the increase in the compressive force, while increasing the mass density thereof, but,

when the applied compressive force is decreased, the decreased volume does not fully turn back, and a part of the decreased volume corresponding to an elastic strain turns, so as to simulate a state of the snow deformed by the applied compressive force,

c) setting of conditions for rolling the tire model and contacting the tire model with the snow model;

d) computing of deformation of the tire model; and

e) computing of deformation of the snow model,

f) repeatedly carrying out steps c), d) and e) at minute time intervals to obtain at least one of the following data: a force produced on the tire model in the back and forth direction; and mass density, pressure, stress, speed and contact force of the snow model, and

g) outputting said at least one of the data.